



REMARKS

Applicants respectfully request the Examiner's reconsideration of the present application as amended. Claims 1-31 remain in the application.

As a preliminary matter, the Examiner indicated that the references were not considered and made of record on the PTO-1449 form mailed May 2, 2001. The Examiner requested that Applicants provide a new copy of the list as well as the references previously sent. Applicants will submit copies of the references as well as the 1449 form shortly.

Examiner rejected claims 1-2 and 5-31 under 35 U.S.C. §102(e) as being anticipated by US Patent No. 5,838,306 of O'Connor, et al ("O'Connor"). With respect to claim 1, the Examiner states that O'Connor discusses a touchpad device having a detection array with a detection surface configured to receive a fingerprint image. The examiner further asserts that the touchpad device operates as a pointer control device or a fingerprint recognition device.

Applicants respectfully disagree.

O'Connor describes a mouse for cursor control that includes a separate impression area for a fingerprint. The fingerprint impression area operates as a fingerprint recognition device and as a button providing normal switching functions. (O'Connor, col. 3, lines 8-22, col. 4, lines 3-4). The fingerprint impression area does not operate as a pointer movement control device. Rather, the ball within the mouse is used as the pointer control device. (O'Connor, col. 3, lines 23-26).

In contrast, claim 1 recites:

1. A touchpad device comprising:
a detection array having a detection surface, wherein the detection surface is configured to receive a fingerprint image;

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a processing device to receive image data from the detection array, the processing device further to configure the touchpad device to operate as a pointer control device or a fingerprint recognition device based upon parameters associated with the image data.

(Claim 1, as amended) (emphasis added). O'Connor does not teach or suggest using the fingerprint image as a pointer control device, as recited in claim 1. Furthermore, O'Connor does not teach or suggest using parameters associated with the fingerprint image to configure the use of the fingerprint image. Rather, O'Connor uses standard mouse functionality for pointer movement, and fingerprint images are solely used for recognition. Thus, O'Connor does not need or use parameters to distinguish between a fingerprint recognition function and a pointer control function. Therefore, claim 1, as amended, is not obvious over or anticipated by O'Connor.

Claims 2 and 5-14 depend on claim 1, and incorporate its limitations. Therefore, for at least the same reasons advanced above with respect to claim 1, claims 2 and 5-14 are not anticipated by or obvious over O'Connor.

Similarly, claim 15 recites:

15. A multi-function device comprising:
means for supplying a fingerprint image to a detection surface of a detection array;
means for processing the fingerprint image supplied to the detection array, wherein the means for processing configures the multi-function device to operate as a pointer control device or a fingerprint recognition device based upon parameters associated with the fingerprint image.

(Claim 15). As discussed above with respect to claim 1, O'Connor does not teach or suggest configuring the device to operate as either a pointer control device or a fingerprint recognition device based on certain parameters. Rather, O'Connor has separate mechanisms to implement these separate functionalities –

e.g. a standard mouse ball for pointer control and a fingerprint sensor for fingerprint recognition. Therefore, claim 15 is not anticipated by or obvious over O'Connor. Claims 16-22 depend on claim 15 and incorporate its limitations. Therefore, for at least the same reasons advanced above with respect to claim 15, claims 16-22 are not anticipated by or obvious over O'Connor.

Claim 23 recites:

23. A method of analyzing a fingerprint image to configure the operation of a multi-function device, comprising:
supplying a fingerprint image to a detection surface of a detection array;
analyzing select fingerprint parameters associated with the fingerprint image;
configuring the multi-function device to operate as a pointer control device or a fingerprint recognition device based upon the fingerprint parameters associated with the fingerprint image.

(Claim 23) (emphasis added). As discussed above with respect to claim 1, O'Connor does not teach or suggest configuring the device to operate as either a pointer control device or a fingerprint recognition device based on certain parameters. Rather, O'Connor has separate mechanisms to implement these separate functionalities – e.g. a standard mouse ball for pointer control and a fingerprint sensor for fingerprint recognition. Therefore, claim 23 is not anticipated by or obvious over O'Connor. Claims 24-31 depend on claim 23 and incorporate its limitations. Therefore, for at least the same reasons advanced above with respect to claim 23, claims 24-31 are not anticipated by or obvious over O'Connor.

Examiner rejected claims 1-2, 13, 15-16, 23 and 30-31 under 35 U.S.C. §102(e) as being anticipated by Crawford (GB 2312040). Crawford discusses a mouse with several fingerprint platforms that may be used for fingerprint recognition (Crawford, pg. 2, lines 9-10). Crawford also discusses the operation

of a pointing device when a rolling trackball is used within a mouse (Crawford, pg. 2, lines 12-13). Thus, as with O'Connor above, Crawford uses separate devices for cursor control and fingerprint recognition. Therefore, for the same reasons described above with respect to O'Connor, the claims are not anticipated by or obvious over Crawford.

Examiner rejected claims 1-2, 13, 15-16, 23 and 30-31 under 35 U.S.C. §102(e) as being anticipated by Rao, et al. (WO 98/11501). Rao discusses a low cost fingerprint capture device that is integrated with a computer mouse. The fingerprint capture device or Rao is completely separate from the mouse itself. (Rao, Figures 4A and 4B, pg. 7, lines 30-31, and pg. 13, lines 32-35). Thus, as with O'Connor above, Rao uses separate devices for cursor control and fingerprint recognition. Therefore, for the same reasons described above with respect to O'Connor, the claims are not anticipated by or obvious over Rao.

Examiner rejected claims 1-2, 13, 15-16, 23 and 30-31 under 35 U.S.C. §102(e) as being anticipated by US Patent No. 6,148,094 of Kinsella. Kinsella discusses a pointing device with a biometric sensor that provides continuous verification. (Kinsella, col. 6, lines 11-15). The sensor is located such that during normal use, the biometric data can be continuously received. (Kinsella, abstract). This directly teaches away for a system in which the fingerprint data is used for pointer control or for fingerprint recognition. Furthermore, Kinsella does not teach or suggest the use of fingerprint image parameters for such configuration. Therefore, as discussed above with respect to O'Connor, Kinsella uses separate devices for cursor control and fingerprint recognition. Therefore, for the same reasons described above with respect to O'Connor, the claims are not anticipated by or obvious over Kinsella.

Examiner rejected claims 1-4, 13, 15-16, 23 and 30-31 under 35 U.S.C. §102(e) as being anticipated by US Patent No. 5,991,431 of Borza. Borza discusses a mouse that has coupled to it a fingerprint sensor. The fingerprint sensor is separate from the pointer control device, which is provided by a conventional mouse mechanism. (Borza, col. 6, lines 39-47). Therefore, as discussed above with respect to O'Connor, Borza uses separate devices for cursor control and fingerprint recognition. Therefore, for the same reasons described above with respect to O'Connor, the claims are not anticipated by or obvious over Borza.

Examiner rejected claims 3-4 under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 5,838,306 of O'Connor, et al. in view of US Patent No. 5,732,148 of Keagy, et al. Claims 3-4 depend on claim 1, and incorporate its limitations.

As discussed above, O'Connor recites a mouse having attached fingerprint sensing platforms. However, the fingerprint sensing mechanism of O'Connor cannot be used for pointer control. Rather, a separate mechanism is provided for pointer control. Keagy discusses a sheet prism based fingerprint sensor. However, Keagy does not overcome the shortcomings of O'Connor. O'Connor and Keagy in combination do not teach or suggest the use of fingerprint parameters to either capture a fingerprint for identification or to use the fingerprint for pointer control. Therefore, claims 3-4 are not obvious over O'Connor in view of Keagy.

Examiner rejected claims 5-12, 14, 17-22, and 24-29 under 35 U.S.C. §103(a) as being unpatentable over US patent No. 5,991,431 of Borza in view of US Patent No. 5,838,306 of O'Connor. As discussed above, Borza recites a mouse with an attached fingerprint sensor. O'Connor similarly discusses a mouse using conventional mouse techniques to provide pointer control and including a

fingerprint sensor for biometric identification. Neither O'Connor nor Borza, alone or in combination, teach or suggest using the fingerprint images for pointer control based on certain parameters, as recited in the claims. Therefore, the claims are not obvious over Borza in view of O'Connor.

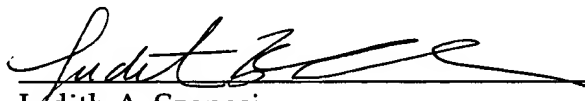
Applicants respectfully submit that in view of the amendments and discussion set forth herein, the applicable rejections have been overcome. Accordingly, the present and amended claims should be found to be in condition for allowance.

If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to contact Judith A. Szepesi at (408) 720-8300.

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES

1. (Once Amended) A touchpad device comprising:
a detection array having a detection surface, wherein the detection surface is configured to receive a fingerprint image;
a processing device [configured] to receive [the fingerprint image or] image data from the detection array, [wherein] the processing device further to configure[s] the touchpad device to operate as a pointer control device or a fingerprint recognition device based upon parameters associated with the [fingerprint] image data.

16. (Once Amended) The multi-function device of claim 15, wherein the pointer control device controls movement of a cursor on a display screen [the means for processing is configured to selectively operate the multi-function device as a pointer control device or a fingerprint recognition device based upon parameters associated with the fingerprint image].